

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Application No.: 09/833,084 Confirmation No.: 8866  
First Named Inventor: Ibrahim Abdulhalim et al. Filing Date: April 10, 2001  
Group Art Unit: 1775 Examiner: Unknown  
Atty. Docket No.: M-10703 US/TNCR.196US0  
Title: PERIODIC PATTERNS AND TECHNIQUE TO CONTROL MISALIGNMENT  
Assignee: KLA-TENCOR CORPORATION

San Francisco, California  
March 27, 2003

COMMISSIONER FOR PATENTS  
Washington, D. C. 20231

PRELIMINARY AMENDMENT

Dear Sir:

Prior to examination, please amend the above-referenced application as follows:

IN THE CLAIMS:

Please add new claims 55-84 as follows:

55. (New) A method for controlling layers alignment in a multi-layer sample, the method comprising the steps of:

- (i) providing a measurement site including two regions located one above the other in two different layers, respectively, said regions containing patterned structures of certain known periodicity;
- (ii) illuminating said site with electromagnetic radiation and detecting a parameter of radiation diffracted from the patterned structures indicative of a lateral shift between the patterned structures; and
- (iii) analyzing said parameter to determine an existing lateral shift between the layers.

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